

Claims (for U.S. application)

1. An image processing apparatus having synthesizing means for synthesizing image information in the form of digital signals and
5 template information, the apparatus comprising:

rotation processing means for effecting a rotation operation on the template information according to a posture of the image information which is either a vertical posture or a horizontal posture, the vertical and horizontal postures having different vertical and horizontal sizes from each
10 other, the template information having a reference display posture corresponding to either said vertical or horizontal posture of the image information; and

converting means for converting the template information according to a predetermined rule when said rotation processing means
15 effects the rotation operation.

2. The image processing apparatus according to claim 1, wherein the template information comprises image data for forming, in said reference display posture, horizontal sides and vertical sides around the
20 image information and said rule includes a numerical value representing a ratio so that the horizontal sides and the vertical sides of the template information after the rotation operation thereof are set to a predetermined width ratio.

25 3. The image processing apparatus according to claim 1, wherein the template information comprises character string data for displaying a leading character according to a predetermined reference coordinate system in the reference display posture; and said rule includes a parameter for converting a display position of the leading character into a
30 value corresponding to a length of one side of the image information after

the rotation operation and a parameter for setting an inter-character distance of the character string according to the length of said one side.

4. The mage processing apparatus according to claim 1,
5 wherein the template information comprise image data to be set within the image information based on predetermined locate information in the reference display posture; and said rule includes a parameter for converting the locate information so that the template information may be displayed at a predetermined position within the image information during the rotation
10 operation.

5. The mage processing apparatus according to claim 2,
further comprising an edit processing means including an image layer for storing the image information and a template layer for storing the
15 converted template information, the edit processing means being capable of freely adjusting positional relationship between the image layer and the template layer.

6. An image processing method having the step of
20 synthesizing image information in the form of digital signals and template information; the method comprising the steps of:

setting the template information to a reference display posture corresponding to either a vertical posture or a horizontal posture of the image information, the vertical and horizontal postures having different
25 vertical and horizontal sizes from each other;

rotating the template information according to the posture of the image information; and

converting the template information according to a predetermined rule when said rotating step is effected.

30

7. An image processing method for enlarging/reducing template information in the form of a frame-like image, the method comprising the steps of:

5 dividing the template information into a plurality of frame segments information;

enlarging/reducing at least one of the frame segments information obtained by the dividing step with maintaining a width of the frame segment; and

10 generating new template information for forming a new frame-like image by using the enlarged/reduced frame segment information.

8. The image processing method according to claim 7, wherein in said step of dividing the template information, the template information is divided into a first area including a frame segment disposed
15 parallel with the reference direction, a second area including a further frame segment disposed normal to the reference direction and a third area flanked between the first area and the second area, and said enlarging/reducing step is effected along the reference direction for the frame segment information included in the first area, said
20 enlarging/reducing step is effected along the direction normal to the reference direction for the further frame segment information included in the second area and said enlarging/reducing step is not effected at all for the frame segment information included in the third area.

25 9. The image processing method according to claim 7, wherein the template information is adapted for forming a frame-like image in the rectangular or substantially rectangular form.

30 10. The image processing method according to claim 7, wherein in the dividing step, within the frame-like mage formed by the

template information, there is formed a first rectangle consisting of sides parallel to the reference direction and further sides normal to the reference direction, and the template information is divided into the plurality of frame segments information by cutting off the frame-like image by extensions obtained by extending the respective sides of said first rectangle.

11. The image processing method according to claim 10, wherein said first rectangle has a plurality of the sides whose lengths are set so that the rectangle obtains a maximum area within the frame-like image.

12. The image processing method according to claim 10, wherein the template information is adapted for forming a projection projecting into the frame-like image, and said first rectangle is formed at a position not separating said projection from a frame portion including this projection.

13. The image processing method according to claim 8, wherein said predetermined rule is set so that the enlarging/reducing step is effected on either one of the first and second areas.

14. The image processing method according to claim 7, wherein the template information is adapted for forming a non-rectangular frame image and in the dividing step, within the non-rectangular frame-like image formed by the template information, there is formed a second rectangle consisting of sides parallel to the reference direction and further sides normal to the reference direction, and the template information is divided into the plurality of frame segments information by cutting off the frame-like image by extensions obtained by extending the respective sides of said second rectangle.

15. The image processing method according to claim 7,
wherein said reference direction is set normal to a transporting direction of
a print paper to which the frame-like image based on the template
5 information is outputted.

16. An image processing program executable by a computer
for effecting an enlarging/reducing operation on template information for
forming a frame-like image, the operation including the steps of:

10 dividing the template information into a plurality of frame
segments information;

enlarging/reducing at least one of the frame segments information
obtained by the dividing step with maintaining a width of the frame
segment; and

15 generating new template information for forming a new frame-like
image by using the enlarged/reduced frame segment information.

17. A recording medium storing an image processing program
executable by a computer for effecting an enlarging/reducing operation on
20 template information for forming a frame-like image, the operation
including the steps of:

dividing the template information into a plurality of frame
segments information;

25 enlarging/reducing at least one of the frame segments information
obtained by the dividing step with maintaining a width of the frame
segment; and

generating new template information for forming a new frame-like
image by using the enlarged/reduced frame segment information.